

S/N unknown

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: IKEDA Serial No.: unknown
Filed: concurrent herewith Docket No.: 12052.44US01
Title: BAR-SHAPED LIGHT GUIDE, LINE-ILLUMINATING DEVICE
INCORPORATED WITH THE BAR-SHAPED LIGHT GUIDE AND
CONTACT-TYPE IMAGE SENSOR INCORPORATED WITH THE LINE-
ILLUMINATING DEVICE

CERTIFICATE UNDER 37 CFR 1.10

'Express Mail' mailing label number: EL 920770149 US

Date of Deposit: July 26, 2001

I hereby certify that this correspondence is being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

By:

Name: Omesh Singh

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D. C. 20231

Dear Sir:

In connection with the above-identified application filed herewith, please enter the following preliminary amendment:

IN THE CLAIMS

Please amend claims 3 and 7-10 as follows:

3. (AMENDED) A line-illuminating device incorporated with the bar-shaped light guide according to claim 1, wherein said bar-shaped light guide is housed in a casing so that the emission plane is exposed, at least one end of the bar-shaped light guide is provided with a light-emitting means, and said light scattering patterns are provided so that an area for forming the light scattering patterns is larger in proportion to the distance from the light-emitting means.

7. (AMENDED) The line-illuminating device according to [any one of claims 4 through 6] claim 4, wherein said light guide section and said light condensing section are covered by a light guide casing except the emission plane for the document illuminating light.

8. (AMENDED) The line-illuminating device according to [any one of claims 4 through 7] claim 4, wherein one end of said light guide section is provided with a light source and the other end thereof is provided with a reflecting means.

9. (AMENDED) The line-illuminating device according to [any one of claims 4 through 8] claim 4, wherein one end of said light guide section is provided with the light source, and density of the light scattering patterns formed in the longitudinal direction of said light guide section is gradually increased toward the other end of the light guide section.

10. (AMENDED) A contact-type image sensor provided with a line-illuminating device in which the bar-shaped light guide according to claim 1 [or claim 2] is incorporated, and a lens array for allowing light reflected from a document among the illuminating light from said line-illuminating device to be condensed toward a line image sensor made of a photoelectric conversion element, characterized in that said lens array is composed of a plurality of rod lenses, and an optical axis of said lens array is arranged in an area with less change of light intensity relative to elevation of the document.

REMARKS

The above preliminary amendment is made to remove multiple dependencies from claims 3, and 7-10.

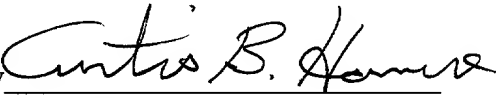
Applicants respectfully request that the preliminary amendment described herein be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Curtis B. Hamre (Reg. No. 29,165), at (612) 336.4722.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Dated: July 26, 2001

By 
Curtis B. Hamre
Reg. No. 29,165

CBH/pjk

MARKED-UP COPY OF CLAIMS

3. A line-illuminating device incorporated with the bar-shaped light guide according to claim 1 [or claim 2], wherein said bar-shaped light guide is housed in a casing so that the emission plane is exposed, at least one end of the bar-shaped light guide is provided with a light-emitting means, and said light scattering patterns are provided so that an area for forming the light scattering patterns is larger in proportion to the distance from the light-emitting means.

7. The line-illuminating device according to [any one of claims 4 through 6] claim 4, wherein said light guide section and said light condensing section are covered by a light guide casing except the emission plane for the document illuminating light.

8. The line-illuminating device according to [any one of claims 4 through 7] claim 4, wherein one end of said light guide section is provided with a light source and the other end thereof is provided with a reflecting means.

9. The line-illuminating device according to [any one of claims 4 through 8] claim 4, wherein one end of said light guide section is provided with the light source, and density of the light scattering patterns formed in the longitudinal direction of said light guide section is gradually increased toward the other end of the light guide section.

10. A contact-type image sensor provided with a line-illuminating device in which the bar-shaped light guide according to claim 1 [or claim 2] is incorporated, and a lens array for allowing light reflected from a document among the illuminating light from said line-illuminating device to be condensed toward a line image sensor made of a photoelectric conversion element, characterized in that said lens array is composed of a plurality of rod lenses, and an optical axis of said lens array is arranged in an area with less change of light intensity relative to elevation of the document.